WHAT IS CLAIMED IS:

1.   An apparatus for receiving a common-part sublayer packet (CPS-packet) on an ATM adaptation layer (AAL) configured connection within an asynchronous transfer mode (ATM) system comprising a digital signal processor (DSP) sub-system and a host processor, said apparatus comprising:

a first direct memory access unit having an output coupled to said DSP sub-system and operably configured to forward data stored in a phone line memory unit to said DSP sub-system, said phone line memory unit corresponding to a channel identification (CID); and

a second direct memory access unit having an output coupled to said host processor and operably configured to forward data stored in a host memory unit to said host porcessor, wherein data is forwarded to said host memory unit in response to CID and user-to-user indication (UUI) filtering.

2.   The apparatus of Claim 1 implemented in an AAL2 module.

3.   The apparatus of Claim 1 further comprising:

a channel identification (CID) filter having an input for receiving a signal indicating a CID corresponding to a common-part sublayer packet (CPS-packet) and operably configured to forward said CPS-packet to said host memory unit upon detecting a CID match;

a user-to-user indication (UUI) filter having an input for receiving a signal indicating a UUI corresponding to said CPS-packet and operably configured to forward said CPS-packet to said host memory unit upon detecting an UUI match;

a AAL receive table having a plurality of entries for storing phone line identifiers and having an input for receiving said CPS-packet CID upon an indication of a CID and an UUI non-match from said CID and said UUI filter, wherein said CPS-packet CID is indexed to a corresponding phone line identifier in said AAL receive table, and wherein said CPS-packet is forwarded to said phone line memory unit associated with said indexed phone line identifier.

4.   The module of Claim 3 implemented in hardware.

5.   The module of Claim 3 integrated onto a silicon chip.

6.   The module of Claim 3, wherein said entries in said AAL receive table are

updatable upon an indication from said host processor.

7.   The module of Claim 3 further comprising a processor operably

5   configured to extract said CPS packet from a received ATM data cell.

8. A system for receiving common-part sublayer packet (CPS-packet) on an ATM adaptation layer (AAL) configured connection within an asynchronous transfer mode (ATM) system comprising a digital signal processor (DSP) sub-system and a host processor, said system comprising:

a switching processor for reading a channel identification (CID) and a user-to-user indication (UUI) associated with a received CPS-packet and having an output for forwarding said CID and said UUI;

a first direct memory access unit having an output coupled to said DSP sub-system and operably configured to forward data stored in a phone line memory unit to said DSP sub-system, said phone line memory unit corresponding to a CID; and

a second direct memory access unit having an output coupled to said host processor and opeably configured to forward data stored in a host memory unit to said host porcessor, wherein data is forwarded to said host memory unit in response to CID and UUI filtering.

9. The system of Claim 8 implemented in an AAL2 module.

10.   The system of Claim 8 further comprising:

a CID filter having an input for receiving said forwarded CID and operably configured to forward said CPS-packet to a receive host memory unit upon detecting a CID match;

5   a UUI filter having an input for receiving said forwarded UUI and operably configured to forward said CPS-packet to said receive host memory unit upon detecting a UUI match;

a AAL receive table having a plurality of entries for storing phone line identifiers and having an input for receiving said CPS-packet CID upon an indication of an UUI non-match from said UUI filter, wherein said CPS-packet CID is indexed to a corresponding phone line identifier in said AAL receive table, and wherein said CPS-packet is forwarded to a phone line memory unit associated with said indexed phone line identifier;

a DSP interface having an output for forwarding data forwarded to said

15   phone line memory unit to said DSP sub-system; and

a host interface having an output for forwarding data forwarded to said host memory unit to said host processor.

11.   The system of Claim 10 implemented in hardware.

12.   The system of Claim 10 integrated onto a silicon chip.

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13.   The system of Claim 10, wherein said entries in said AAL receive table are updatable upon an indication from said host processor.

14.   The system of Claim 10, wherein said switching processor is further operably configured to extract said CPS-packet from a received ATM data cell.

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15.   The system of Claim 10, wherein said UUI filter is further operably configured to selectively discard said CPS-packet upon detecting a UUI match.

16.   A method of receiving common-part sublayer packet (CPS-packet) on an
ATM Adaptation layer (AAL) configured connection within an asynchronous
transfer mode (ATM) system comprising a digital signal processor (DSP) sub-
system and a host processor, said method comprising:

5   comparing a channel identification (CID) associated with an CPS-packet
with a CID filter, wherein said CPS-packet is forwarded to a receive host memory
unit accessible by said host processor when said CID filter indicates a CID match;
otherwise

          comparing a user-to-user indication (UUI) associated with said CPS-
10   packet with a UUI filter, wherein said CPS-packet is forwarded to said receive
host memory unit when said UUI filter indicates a UUI match; otherwise

          indexing said CID to a corresponding phone line identifier in a channel
look-up table; and

          forwarding said CPS-packet to a phone line memory unit accessible by
15   said DSP sub-system associated with said indexed phone line identifier.

17.   The method of Claim 16 further including forwarding data associated with
said CPS-packet stored in said host memory unit to said host processor; and

18.   The method of Claim 16 further including forwarding data associated with said CPS-packet stored in said phone line memory unit to said DSP subsystem.

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19.   The method of Claim 16 implemented in hardware.

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20.   The method of Claim 16 further including extracting said CPS-packet from a received ATM data cell.